

Patent claims:

1. Coated particulate peroxygen compounds, in particular coated sodium percarbonate particles, with a delayed release of the active oxygen in the aqueous phase,  
5 comprising at least two shell layers on a core of the peroxygen compound, wherein an innermost layer, which makes up 2 to 20 wt.%, based on the coated particles, comprises at least one hydrate-forming inorganic salt and an outer layer comprises an alkali metal silicate  
10 with a modulus of  $\text{SiO}_2$  to  $\text{M}_2\text{O}$  ( $\text{M}$  = alkali metal) of greater than 2,5,  
characterized in that  
the outer layer comprises as the main component alkali metal silicate in an amount of 0.2 to 3 wt.%, based on  
15 the coated particles, and has been prepared using an aqueous solution containing alkali metal silicate with a concentration in the range from 2 to 20 wt.% alkali metal silicate.
2. Coated particles according to claim 1,  
20 characterized in that  
the outer layer has been prepared using an alkali metal silicate solution with a modulus in the range from 3 to 5, in particular 3.2 to 4.2, and a concentration in the range from 3 to 15 wt.%, in particular 5 to 10 wt.%.
- 25 3. Coated particles according to one of claims 1 or 2,  
characterized in that  
the outer layer has been prepared using a sodium water-glass solution diluted to 2 to 20 wt.%, in particular 5 to 10 wt.% sodium silicate.
- 30 4. Coated particles according to one of claims 1 to 3,  
characterized in that  
the outer shell layer comprising alkali metal silicate comprises 0.3 to less than 1 wt.% alkali metal silicate, based on the coated particles, and the dissolving time

(95% dissolution in water at 15°C and 2 g/l) is longer than 5 minutes, in particular longer than 10 minutes.

- 5 5. Coated particles according to one of claims 1 to 4,  
characterized in that

the innermost shell layer makes up 2 to 10 wt.%,  
calculated as the hydrate-free form and based on the  
coated particles, and substantially comprises one or  
more salts from the series consisting of alkali metal  
sulfates, alkali metal carbonates, alkali metal  
bicarbonates, mixed salts of sodium bicarbonate, alkali  
metal borates and alkali metal perborates.

- 10 6. Coated particles according to one of claims 1 to 5,  
characterized in that  
they have two or three shell layers, the innermost layer  
15 substantially comprising sodium sulfate and a layer on  
top of this substantially comprising sodium silicates  
with a modulus in the range from 3 to 5.

- 15 7. Coated particles according to claim 6,  
characterized in that

20 the innermost layer makes up substantially 2 to 10 wt.%  
sodium sulfate and an outer layer substantially  
comprising sodium silicates makes up 0.3 to less than 1  
wt.%, in each case based on the coated particles.

- 25 8. Coated particles according to one of claims 1 to 7,  
characterized in that

they have, on an outer layer comprising or preferably  
substantially consisting of alkali metal silicate, one  
or more further closed or partly open shell layers.

- 30 9. Coated particles according to claim 8,  
characterized in that

they have on their surface a fine-particled inorganic or  
organic free-flowing auxiliary substance, in particular  
a free-flowing auxiliary substance from the series  
consisting of precipitated and pyrogenic silica, which

can be hydrophilic or hydrophobic, aluminium oxide, titanium dioxide, aluminium silicate and montmorillonite.

10. Coated particles according to one of claims 1 to 9,  
5 characterized in that  
they have an average particle diameter of 0.5 to 1 mm,  
contain substantially no particles smaller than 0.2 mm  
and have been coated by fluidized bed coating.
11. Coated particles according to claim 10,  
10 characterized in that  
they have a  $D_{10}$  value of at least 0.35 mm, in particular  
of at least 0.5 mm.
12. Coated particles according to claim 10,  
characterized in that  
15 the fraction of particles with a diameter smaller than  
0.4 mm is less than 10 wt.%, in particular less than  
5 wt.%.
13. Process for the preparation of coated particulate  
peroxygen compounds, in particular coated sodium  
20 percarbonate particles, according to one of claims 1  
to 11,  
comprising coating of the particles to be coated, such  
as, in particular, sodium percarbonate particles,  
wherein the particles are brought into contact with an  
25 aqueous solution containing at least one shell component  
and are dried and at least two shell layers are formed,  
characterized in that  
for the preparation of an outer shell layer comprising  
alkali metal silicate as the main component, an aqueous  
30 solution containing alkali metal silicate with an alkali  
metal silicate concentration in the range from 2 to  
20 wt.% and a modulus of  $\text{SiO}_2$  to  $M_2\text{O}$  ( $M$  = alkali metal)  
of greater than 2.5 is used and this solution is sprayed  
on to particles which have at least one innermost shell

layer of at least one hydrate-forming shell component, with simultaneous or subsequent evaporation of water, until the outer layer comprises 0.2 to 3 wt.% alkali metal silicate.

- 5 14. Process according to claim 13,  
characterized in that  
an alkali metal silicate solution, in particular a sodium water-glass solution, with a content of 3 to 15 wt.%, in particular 5 to 10 wt.% alkali metal silicate, is sprayed on.
- 10 15. Process according to claim 13 or 14  
characterized in that  
an innermost layer of 3 to 10 wt.% of substantially sodium sulfate, calculated as the hydrate-free form and based on the coated sodium percarbonate, is applied to sodium percarbonate particles and a sodium water-glass solution substantially comprising sodium silicate with a modulus in the range from 3 to 5 with a concentration of sodium silicate in the range from 5 to 10 wt.% is then sprayed on, and the spraying is ended after application of 0.2 to 3 wt.%, in particular 0.3 to less than 1 wt.% sodium silicate.
- 15 20 16. Process according to one of claims 13 to 15,  
characterized in that  
the outer layer comprising alkali metal silicate is applied by fluidized bed coating to the particles having at least one innermost shell layer.
- 25 30 17. Process according to one of claims 13 to 16,  
characterized in that  
the sodium percarbonate coated with an innermost layer of at least one hydratable salt and an outer layer of alkali metal silicates as the main component is brought into contact with a pulverulent inorganic free-flowing auxiliary substance in an effective amount.

18. Use of coated peroxygen compounds, in particular coated sodium percarbonate particles, according to one of claims 1 to 11 or prepared according to one of claims 13 to 17 as a bleaching component in bleaching compositions, detergents and cleaning compositions, in particular those in which sodium percarbonate is to be released in a delayed manner in the aqueous phase.